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Title: **JP10050343A2: FLUORINE-CONTAINING SOLVENT FOR LITHIUM BATTERY WITH HIGH SAFETY**

Country: **JP** Japan

Kind: **A**

Inventor: **BESENHARD JUERGEN OTTO PROF DR;  
WERNER KONRAD VON DR;  
WINTER MARTIN DR;**

Assignee: **HOECHST AG**  
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Published / Filed: **Feb. 20, 1998 / May 12, 1997**

Application Number: **JP1997000121202**

IPC Code: **H01M 10/40;**

Priority Number: **May 13, 1996 DE1996019619233**

Abstract:

**PROBLEM TO BE SOLVED:** To enhance safety of an electrolyte-containing device and provide an electrolyte solution with viscosity and conductivity capable of being used even at low temperature by using a partially fluorinated aliphatic ether of the specified group as a solvent of an electrolyte system of a lithium secondary battery.


**SOLUTION:** An effective amount of at least one of partially fluorinated ether represented by formula I and/or at least one of partially fluorinated ether represented by formula II are/is added to an electrolyte system as a fluorine-containing solvent for a lithium battery with high safety. Formula I:  $\text{RO}-[(\text{CH}_2)_m]_n\text{-CF}_2\text{-CFH-X}$ , (R is a straight-chain alkyl group having 1 to 10 carbon atoms or a branched alkyl group having 3 to 10 carbon atoms, X is a perfluoroalkyl group having 1 to 6 carbon atoms allowed it to contain a fluorine atom, chlorine atom, or ether oxygen, m is an integer of 2-6, and n is an integer of 1-8.) Formula II:  $\text{X-CFH-CF}_2\text{-O}-[(\text{CH}_2)_m]_n\text{-CF}_2\text{-CFH-X}$  (X, m, and n are the same as the formula I).

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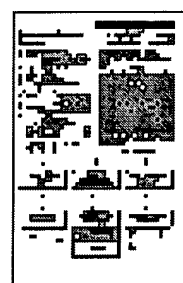
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Forward References:

PDF	Patent	Pub.Date	Inventor	Assignee	Title
	<a href="#">US6210835</a>	2001-04-03	Arai, Juichi	Hitachi, Ltd.	<a href="#">Lithium secondary battery and liquid electrolyte for the battery</a>

Other Abstract **CHEMABS 128(05)050763H DERABS C1997-552597**



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**(54) FLUORINE-  
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